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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,089	12/27/2006	Tommaso Di Giacomo	4235.438	4343

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EXAMINER	
MOMPER, ANNA M	

ART UNIT	PAPER NUMBER
3657	

MAIL DATE	DELIVERY MODE
12/08/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/551,089	DI GIACOMO ET AL.	
	Examiner	Art Unit	
	ANNA MOMPER	3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 September 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16 and 22-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *12-14* is/are allowed.

6)☒ Claim(s) *1-11,15,16 and 22-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 September 2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Amendment to the claims received 9/22/2009 has been entered. Claims 1, 4-26 have been amended.

2. Amendment to the specification dated 9/22/2009 has been entered.

3. Amendment to the drawings dated 9/22/2009 has been entered. The previously made objection to the drawings has been withdrawn.

Response to Arguments

4. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

5. It is noted, with respect to the new rejection of the claims, that claim 1 recites "for driving a rotary member of a pump of a combustion engine" which recites a functional limitation. Based on later recitations of the details of the claimed drive assembly and the further recitation of a rotary member, it is determined that while a rotary member is described and required, it does not specifically require that the rotary member be attached to a pump, but need only be capable for use in an application such as a pump.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1, 4-8 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrett (US 2,823,546) in view of Temma et al. (US 2002/0183149 A1)

As per claim 1, Barrett discloses drive assembly (Fig. 2-5) for driving a rotary member (1), of a pump (in this case it is a starter, but is capable for use with a pump) of a combustion engine (Col. 1, Ln. 23-25); the assembly comprising:

a movable supporting member (11);

a drive wheel (13) fitted idly to said movable supporting member (11, Fig. 1);

elastic means (16) for moving exerting a force on said movable supporting member (11) so that said drive wheel (13) drivingly contacting said rotary member (1) and a drive member (20) powered by said combustion engine (Col. 1, Ln. 26-37) to drive the rotary member (11);

Barrett fails to explicitly disclose an actuating means provided to exert a force in opposition to that exerted by said elastic means to detach said drive wheel from at least one of said rotary member and said drive member, and wherein said actuating means comprising a reversible electric motor such that a force exerted by said elastic means to

push said drive wheel against said rotary member and said drive member being greater than the travel resistance of said actuating means when maintained in a disabled rest condition.

Temma et al. discloses a tensioner (50, Fig. 4, Fig. 5) having an idler wheel (51) supported on a movable supporting member (53), the idler wheel engages a driving member (15,) and an elastic means in the form of a spring (54) for biasing the tensioner in a direction for engaging and positively tensioning the driving member (15) via the idler wheel, and wherein said tensioner further comprises an actuator in the form of a motor (55) having a gear train (56, 53b) for exerting a secondary force on the tensioner in a direction opposite that of the spring to relieve tension on the driving member.

It would have been obvious to one of ordinary skill in the art to modify the drive assembly of Barrett to include an reversible motor to exert a force in opposition to that exerted by said elastic means to detach said drive wheel from at least one of said rotary member and said drive member, as taught by Temma et al., for the purpose of providing a controllable means for selectively engaging and disengaging the rotary member.

As per claim 4, Temma et al. further discloses the actuating means also comprise a mechanical drive (53b, 56) interposed between the motor (55) and said movable supporting member (53).

As per claim 5, Temma et al. further discloses the movable supporting member (53) comprises a connecting portion (Fig. A) disposed opposite to an end portion (having pin 52a) that supporting said drive wheel (51), and connected to said

mechanical drive (via end having teeth 53b) to move said supporting member along a circular trajectory.

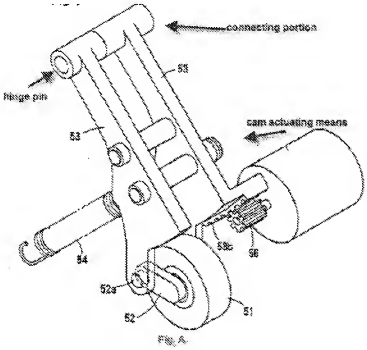

Fig. A

As per claim 6, Temma et al. further discloses the mechanical drive comprises a gear drive (56, 53b) interposed between the electric rotary motor (55) and said movable supporting member (53).

As per claim 7, Temma et al. further discloses the mechanical drive comprises cam actuating means (Fig. A).

As per claim 8, Temma et al. further discloses cam actuating means (Fig. A) are interposed between said gear drive (56, 53b) and said connecting portion (Fig. A).

AS per claim 22, Temma et al. further discloses the movable supporting member (53) comprises two contoured portions.

As per claim 23, Temma further discloses the contoured portions extend on opposite sides of a central plane of symmetry of the drive wheel (51), which plane is perpendicular to the axis of rotation of said drive wheel (See Fig. 4).

As per claim 24, Modified Barrett doesn't explicitly disclose said contoured portions being made of molded plastic material. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the contoured portions to be made of molded plastic material to provide proper strength and weight characteristics. Also note MPEP Section 2144.07 states that the selection of a known material based on its suitability for its intended use supports a prima facie obviousness determination.

As per claim 25, Temma et al. further discloses contoured portions contact, and are connected integrally to, each other (See Fig. 4).

As per claim 26, Temma et al. further discloses contoured portions define at least one end fork having respective arms; each arm having a respective integral cylindrical projection forming part of a hinge pin (52b) coaxial with a relative axis (see Fig. 4), and to which the drive wheel (51) is mounted to rotate about the relative axis (paragraph 0063, lines 19-21).

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barrett (US 2,823,546) in view of Temma et al. (US 2002/0183149 A1) and further in view of Floehr (US 3,157,132)

As per claim 9, Temma et al. further discloses the connecting portion is a hollow tubular portion having an axis of symmetry (53a) parallel to the axis of rotation (Fig. 4)

of the drive wheel (51) and in that wherein said cam actuating means comprise a first hinge pin engaging said hollow tubular portion in rotary manner about said axis of symmetry (Fig. A) said actuating means (55) rotating said first hinge pin (Fig. A) about said hinge axis.

Modified Barret doesn't explicitly disclose a first hinge pin hinged to a fixed frame to rotate about a hinge axis parallel to and eccentric with respect to the axis of symmetry.

Floehr teaches a pivot assembly having a first hinge pin (48) hinged to a fixed frame to rotate about a hinge axis parallel to and eccentric with respect to the axis of symmetry (see Fig. 11).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the assembly of Modified Barrett to include the hinge pin orientation as taught by Floehr in order to provide alignment to the pin with other parts.

As per claims 15 and 16, Bakker further teaches frame (28) is connected integrally to a fixed body (24) by a single through screw (76) extending coaxially with said hinge axis (see Fig. 1) (Claim 15), and said frame has a recess (38) bounded by a cylindrical end surface coaxial with said axis of symmetry; said connecting portion being housed removably in said recess; and the first hinge pin (70) being connected in rotary manner to a second hinge pin (34) coaxial with the hinge axis and integral with a supporting plate (32) of said frame (see Fig. 1) (Claim 16).

10. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrett (US 2,823,546) in view of Temma et al. (US 2002/0183149 A1) and Floehr (US 3,157,132) and further in view of Bakker (US 5,967,919).

As per claims 10 and 11, Modified Barret fails to explicitly disclose said elastic means comprise a torsion spring housed in the tubular said connecting portion, and having one end fixed angularly to said first hinge pin and the opposite end fixed angularly to the tubular said connecting portion.

Bakker teaches a belt tensioner having said elastic means comprise a torsion spring (26) housed in tubular portion (36) and having one end fixed angularly to first hinge pin (94) and the opposite end fixed angularly to the tubular connecting portion (36) (see col.4, lines 8-16 and see Fig. 2) (Claim 10), and said tubular connecting portion defines an annular cavity (38) coaxial with said axis of symmetry; said torsion spring (26) being a wire spring housed in said annular chamber and coaxial with said axis of symmetry (see Figs. 1 and 2) (Claim 11).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the spring arrangement of Bakker et al. in place of the spring arrangement of Temma et al. in order to bias the wheel on drive member for benefit of a compact mechanism.

Allowable Subject Matter

11. Claims 12-14 allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANNA MOMPER whose telephone number is (571)270-5788. The examiner can normally be reached on M-F 6:00-3:30 (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

am

/Robert A. Siconolfi/
Supervisory Patent Examiner, Art Unit 3657